

Application No.

10/019,083

Applicant

OLEDZKI, WIESLAW JULIAN

AMENDMENTS TO THE CLAIMS

Claims 1-10 (canceled)

Claim 11 (new):

A vehicle suspension system comprising a spring and-at least one flat or spatial four-link mechanism (K, M, W, D), at least 3 kinematic pairs of which are rotational ones, wherein one of the links of said mechanism is coupled with a vehicle wheel, another of said links is coupled with a spring (S), and the whole mechanism is fastened to a vehicle frame through yet another link of said mechanism, to obtain non-linear dependence of deformation of the spring on the vehicle wheel flex, characterized in that, three of said links are made in the form of an eccentric, whereby said four-link mechanism (K, M, W, D) comprises a shaft (W) fitted with an eccentric (MW), the latter being coupled rotationally with the intermediate eccentric (M), the latter being coupled rotationally with a disc (D), wherein the shaft (W) and the disc (D) pivot directly in a body (K).

Claim 12 (new):

A vehicle suspension system according to claim 11, characterized in that the axes of rotation of all the kinematic pairs of said suspension mechanism are parallel to each other.

Claim 13 (new):

A vehicle suspension system according to claim 11, characterized in that the axes of rotation of all the kinematic pairs of said suspension mechanism intersect at a precisely one point P, to obtain a required position of the spring relative to the vehicle wheel.

Claim 14 (new):

A vehicle suspension system according to claim 12 or claim 13, characterized by said body (K) being fastened to a vehicle frame, and said shaft (W) being coupled rigidly with a wheel arm, and wherein the disc (D) is coupled with one end of the spring (S) the other end of which is fixed to the body (K) or directly to the vehicle frame.

Claim 15 (new):

A vehicle suspension system according to claim 12 or claim 13, characterized by said body (K) being fastened to a vehicle frame, and said disc (D) being coupled rigidly with a wheel arm, and said shaft (W) being coupled with one end of a spring (S) the other end of which is fixed to the body (K) or directly to a vehicle frame.

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Claim 16 (new):

A vehicle suspension system according to claim 12 or claim 13, characterized by said shaft (W) being fastened to a vehicle frame through the flange (Z), said intermediate eccentric (M) being coupled rigidly with a vehicle wheel arm (H), and said body (K) being coupled rigidly with one end of a spring (S) the other end of which is fixed to the shaft (W) or directly to the vehicle frame.

Claim 17 (new):

A vehicle suspension system according to claim 12 or claim 13, characterized by said body (K) being fastened to a vehicle frame, said shaft (W) being coupled rigidly with a vehicle wheel arm, and the intermediate eccentric (M) being coupled with one end of an U-shaped torsion bar the other end of which is fixed to the intermediate eccentric of an analogous mechanism of a suspension of the other wheel.

Claim 18 (new):

 A vehicle suspension system comprising a spring and at least one flat or spatial four-link mechanism (K, M, W, D), three kinematic pairs of which are rotational ones and one of the links being made in the form of a slider such that the fourth kinematic pair is a sliding one, wherein one of the links of said mechanism is coupled with a vehicle wheel, another of said links is coupled with a spring (S), and the whole mechanism is fastened to a vehicle frame through yet another link of said mechanism, to obtain non-linear dependence of deformation of the spring on the vehicle wheel flex, characterized in that, two of said links are made in the form of an eccentric, whereby said four-link mechanism comprises a shaft (W) fitted with an eccentric (MW), the latter being coupled rotationally with an intermediate eccentric (M), the latter being coupled rotationally with a slider (D), wherein the shaft (W) pivots directly in a body (K) and the slider is slidingly fitted in the body (K).

Claim 19 (new):

A vehicle suspension system according to claim 18, characterized by a shaft (W) fitted with three eccentrics (MW1), (MW2) and (MW3), the latter being coupled rotationally with corresponding intermediate eccentrics (M1), (M2) and (M3), the latter being coupled rotationally with corresponding sliders (D1), (D2) and (D3), wherein the sliders (D1), (D2) and (D3) are slidingly fitted in the body (K), said body (K) being fastened to a vehicle frame, the slider (D2) being coupled with a vehicle axle and the sliders (D1) and (D3) being coupled with a spring, which, in turn, is fastened to the vehicle frame.